White-tailed Deer Issues and Management

Introduction

Based on previous studies (Scanlon and Vaughan 1981) and observations of vegetative change (Natural Heritage Inventory, 1992), white- tailed deer have become increasingly abundant in many developed areas throughout the park. This is especially evident in the Big Meadows and Loft Mountain Areas. Big Meadows Area (BMA) deer have exceeded their biological carrying capacity for over two decades as evidenced by visible effects on the landscape. Lack of hunting and predation on the deer population plus ongoing maintenance of grassy openings, contribute to high deer densities in park developed areas.

Management Needs

Currently, deer are changing the vegetative species composition and disrupting the natural landscape, the visitor's visual experience, and historic scene value of many areas within the BMA and Loft Mountain Area (LMA). Overabundant deer herds run a much higher risk of disease outbreak, parasites, and winter die- offs (from starvation). Additionally, these deer are causing grazing and browsing impact in developed areas and along the Skyline Drive corridor.

High deer abundance collocated with high visitor use also creates conditions for negative human/deer interactions which often leads to habituated deer. Many of the deer in the BMA and LMA are habituated to park visitors. Habituated deer present safety issues to humans in the form of physical trauma (kicking, goring), Lyme disease transmission (via deer tick), and motor vehicle accidents. Deer- related vehicle accidents also cause monetary loss. Nuisance deer are also more likely to get poached or have difficultly surviving harsh winters because of their reliance on humans. In addition, illegal deer feeding can cause disruption to their complex digestive systems. It is not ecologically appropriate to allow these habituated deer to continue to thrive within these developed areas. We want to provide the public with appropriate wildlife viewing opportunities that have deer browsing in the forest as opposed to begging for food at a car window. Providing viewing opportunities that show deer in a healthier context under more natural conditions can only be achieved if we begin to address the deer overabundance problems in the BMA and LMA.

Current Procedures

Staff will continue to receive training about the issues surrounding human/deer interactions and the detriments of feeding deer. Resource management staff will continue to work with the Interpretive Division to develop media that explain deer/human issues in a compelling way. Current examples include special picnic table- mounted signs that talk about the potential health impacts to deer if they are illegally fed. Another very effective media is the poster entitled "Jane Doe." It shows a road- killed deer and talks about all the things that humans did to cause its death. Roving staff need to continue to educate the public about deer/human interactions in campgrounds and picnic areas. Resource management staff will continue to manage targeted beggar deer in the BMA and LMA (capture and relocate). Resource management staff are also working with the Ranger Activities Division to increase the park's wildlife feeding fine and devise plans for greater uniformed presence in targeted campgrounds and picnic areas.

Park staff is currently attempting to secure funding for a deer population dynamics study at the BMA and LMA. This study will help us determine the cultural carrying capacity for the BMA and LMA deer herds which in turn will help us maintain more natural deer populations, prevent further landscape degradation, and prevent historical scene degradation. Ultimately, more natural deer populations in park developed areas will help preserve the natural landscape features (rare wildflowers, etc.) that visitors have come to expect in places like the unique high-elevation Big Meadow. The findings of this study will generate tangible deer management recommendations. These recommendations along with the results from future studies will be used to update the park's Deer Management Plan and to formulate an Environmental Impact Statement. This will allow park managers to better manage the park's deer populations in developed areas.

Visitors feeding White-tailed deer.

What We Have Learned

• Fall nighttime spotlight counts from 1999- 2003 have yielded an average of 212 deer per square mile (n=49) in the BMA.

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• Spring nighttime spotlight counts taken from 2000- 2004 have yielded an average of 200 deer per square mile (n=33) in the BMA.

• From 2000- 2002 park staff captured and relocated an average of 22 beggar deer per year from LMA, BMA, and the Elk Wallow Area.

• In 2004, 27 of the 74 motor vehicle accidents that occurred parkwide, involved white- tailed deer.

• From 2002- 2004, an average of 33 deer- related motor vehicle accidents occurred yearly.

Capture and relocation of beggar deer at Big Meadows Picnic Area.

White-tailed deer were involved in 27 motor vehicle accidents in 2004. Many of those were from habituated deer.

References

A Natural Heritage Inventory of Shenandoah National Park (Natural Heritage Technical Report #93- 5), February 1993. Division of Natural Heritage, Richmond, VA.

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Scanlon, J.J., and M.R. Vaughan. 1981. Population and behavioral ecology of white- tailed deer in Shenandoah National Park, Virginia. Final Report to the National Park Service, MAR- 22. 74pp.